

USE OF SEARCH ENGINES BY THE FACULTY MEMBERS: A STUDY OF KLE DR. M.S. SHESHGIRI COLLEGE OF ENGINEERING AND TECHNOLOGY –BELGAUM

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ABSTRACT

The aim of this study was to analyze the use of search engines and related issues among the faculties of **K L E Dr. M. S. Sheshgiri College of Engineering and Technology, Belgaum**, India. A well structured questionnaire was distributed among the 156 faculties, out of which 145 duly filled copies were returned, constituting a 92.94 percent response rate. The present study demonstrates and elaborates the various aspects of use of search engines such as, use of engineering and technology subject search engines, Importance and preference of search engines, ways to locate the information from the Internet through search engines, problems faced by the users and satisfaction level of users while using the search engines. The results of the survey provided some of the reasons that influence the satisfaction with information retrieval results of search engines. Internet has revolutionized the information today. The search engines have made searching the Internet very easy. They have emerged as a solution to the problem of accessing information sources on the Net. The study recommends that there is a need to conduct the orientation programme on search engines to help the faculty members for effective and efficient use of search engines for access the qualitative information available on the web.

KEYWORDS: Search Engines, Faculty Members, User Studies, Engineering and Technology Colleges, Belgaum

INTRODUCTION

The significant developments in the field of Information and Communication Technology (ICT) have created revolutionary changes in all fields of knowledge. Libraries, being the reservoirs of knowledge, are no exception to this development. The society and environment around the libraries are changing and getting altered. As a result of information explosion, users are getting access to the vast amount of information.

In the knowledge society, the influence of Information and Communication Technologies (ICT) has a great impact on the libraries which envisages paperless information society, and has brought about drastic changes in library services. It has changed the functioning of the libraries of institutions of higher education. The traditional house-keeping operations and services are diminishing day by day, giving rise to modern dynamic library services as libraries without walls, providing access to various electronic journals, online resources and various databases are accessible through the publisher websites.

The Internet has emerged as the most powerful medium for storage and retrieval of information. In the era of networked information Internet, the largest worldwide network of networks has emerged as the most powerful tool for an instant access to information (Rajeev Kumar and Kaur, 2005). But, in the present Information and Communication Technology (ICT) with a tremendous amount of content on the Internet, retrieving relevant information cannot be achieved easily. Retrieving the relevant information from the overwhelming amount of information has become the need of the hour. But the effective use of search engines for retrieval of information is a crucial challenge for any Internet user. At this juncture, the search engines come into rescue.

A web search engine is an interactive tool to help users locate information available via the internet. Liaw and Huang (2006) explain that the search engines are essential tools for finding information on the World Wide Web (WWW). The number of search engines on the web can help the end users find any information, anytime and anywhere on the web. Thus, the search engines have become a major tool for searching information over Internet (Wirth et al., 2007). The Internet and World Wide Web (WWW) are increasingly becoming popular at all levels of professional career.

Today, the engineering colleges are playing an important role in imparting technical education. The engineers, who are the outcome of these colleges, require the latest and pinpointed information in their respective fields. There is a lot of information available in Engineering and technology discipline over the World Wide Web (WWW). It is very difficult to retrieve the correct information on the web. The search engines can provide links to relevant information based on their requirements or queries. Today it is essential for information professionals to learn the skills of surfing internet and know the tools and techniques for locating and exploiting the information resources in order to provide better information services. Hence, the present study investigates attitudes and perceptions of the 'faculties' towards the use of search engines.

K L E DR. M. S. SHESHGIRI COLLEGE OF ENGINEERING AND TECHNOLOGY, BELGAUM

The KLE Society's Dr. M. S. Sheshgiri College of Engineering and Technology, formerly known as KLE Society's College of Engineering and Technology (KLECET), was established in the year 1979. An ISO 9001-2008 certified institution, recognized by All India Council for Technical Education is affiliated to Visvesvaraya Technological University, Belgaum. The college offers nine undergraduate (B.Tech) and Six postgraduate (M.Tech) programmes and in addition Master of Computer Applications (MCA) and Master of Business Administration (MBA). The Ph.D. courses are also offered for the benefit of the aspirants.

The College library is housed in a spacious modern building and stacks more than 86000 volumes of books and is updated regularly by way of adding new literature in the form of text Books, Reference Books, Reports, Proceedings, Encyclopedias, Standards (National & International) Journals, Audio Visual resources, CDs, Educational Videos and Theses/Reports. library is fully automated by using EASYLIB-Library Management Software. It is a multi-user package for effective management of a library from all aspects. Online catalogue of the library and the e-resources can be accessed on the campus network. The library subscribes to nearly 102 Technical Periodicals and more than 6,197 International e-journals from IEEE, IEL, SpringerLink, Taylor and Francis, Emerald and ProQuest with 13,139 full text E-Books from the major Publishers.

SCOPE AND LIMITATION OF THE STUDY

The scope of the present study is to investigate the use of search engines by the faculty members. The study is restricted to the KLE Dr. M. S. Sheshgiri College of Engineering and Technology, Belgaum. The staff of the study consists of Faculties of Science & Technology discipline.

OBJECTIVES

The primary objective of the present study is to investigate the faculty members' attitudes and perceptions towards the search engines. The specific objectives of the study are to:

- Find out the faculties acquaintance with the Internet sources;
- Know the purpose of use of internet by faculty members;
- Examine the use of various subject search engines for retrieving scholarly information on the web;
- Study the factors that influence the use of search engines;
- Elicit the opinion about the accuracy of information available through search engines; and
- Suggest different ways for accessing information effectively and efficiently through search engines.

METHODOLOGY

The present study is carried out to know the use search engines by the faculty members of The KLE Dr. M.S. Sheshgiri College of Engineering and Technology Belgaum, India. The data is collected from the questionnaire method and supplemented with the interview method. The questionnaire was designed keeping in view the objectives of the study. The questionnaire was divided into four sections; the first section focuses on the demographic information such as gender, age and designation, the second section focuses on the use of internet the third section includes questions on the use of search engines for retrieving scholarly information on the web and the fourth section includes the miscellaneous information towards the search engines. Questionnaires were distributed to a total of 156 faculty members of Engineering Technology and Management studies out of which 145 duly filled in questionnaires received back with 92.94% response rate. The data collected through questionnaires were fed into MS-Excel and simple frequency calculation was used.

DEPARTMENT WISE DISTRIBUTION OF RESPONDENTS

The data summarized in the table 1 demonstrate the department wise distribution of respondents. It shows that the response from the department of Mechanical Engineering is highest i.e 24 (16.55%) compare to other departments. Followed by Computer Science department with 19 (13.10%) response, Electronics and Communication with 18 (12.41%) respondents occupies next place respectively.

Table 1: Department Wise Distribution of Respondents

Departments	No. of Respondents	Percentage (%)
Biomedical Engineering.	08	5.52
Biotechnology	08	5.52
Chemical	04	2.75
Civil	16	11.03
Computer Science	19	13.10
Electrical & Electronics	11	7.58

Table 1-Cond.,

Electronics & Communication	18	12.41
Mechanical	24	16.55
Telecommunication	06	4.13
Master of Business Administration	07	4.82
Master of Computer Application	06	4.13
Chemistry	05	3.44
Mathematics	09	6.20
Physics	04	2.75
Total	145	100.00

USE OF INTERNET

Respondents were asked about the use of internet. It indicates that all the respondents use the internet i.e. 145 (100.00%). All the faculty members were given laptops and desktops the respective department laboratories equipped with latest configured desktops. Some of the faculty members do have desktops at their homes.

Table 2: Use of Internet

Internet Use	No. of Respondents	Percentage (%)
Yes	145	100
No	0	0
Total	145	100.00

FREQUENCY OF USE OF INTERNET

From the table 3, it can be inferred that 122 (84.13%) respondents use internet daily, followed by 10 (6.89%) respondents who use internet thrice a week, 6 (4.13%) respondents use internet twice a week. This means that the use of Internet has become routine in the lives of the Engineering and Technology faculties.

Table 3: Frequency of Use of Internet

Frequency	No. of Respondents	Percentage (%)
Daily	122	84.13
Twice a week	06	4.13
Thrice a week	10	6.89
Weekly	4	2.75
Fortnightly	-	-
Monthly	-	-
Occasionally	3	2.06
Never used before	-	-
Total	145	100.00

PURPOSE OF USING INTERNET

The respondents were asked about the purpose of internet and the data is presented in Table 4. It is clear from the table that 132 (91.03%) respondents use the internet for teaching purpose, 128 (88.27%) respondents use internet for the purpose of E-mail, followed by 97 (66.89%) respondents who use the internet for research, 96 (66.20%) respondents used it for getting general information, 90 (62.06%) respondents use it for accessing e-resources and 48 (33.10%) respondents use internet for entertainment. It is evident from the study that the faculty member's priority in using internet is for teaching, research, and communication etc.

Table 4: Purpose of Internet Use

Sl. No	Purpose	No. of Respondents	Percentage (%)
1	Access e-Resources	90	62.06
2	E-mail	128	88.27
3	Entertainment	48	33.10
4	General Information	96	66.20
5	Research Purpose	97	66.89
6	Teaching	132	91.03

Percentage cannot be rounded after 100

USE OF INTERNET BROWSERS

Internet Browsers are the gateways through which one can access pool of information resources available over Internet. There are number of Internet Browsers available on the web, but choosing a right web browser is a prerequisite to access Internet in an effective way. The respondents were asked questions about the preference of Internet Browsers.

It is evident from the study that with a plenty of options 113 (77.93%) respondents prefer Google Chrome as their best Internet Browser, followed by 93 (64.14%) respondents preferring Mozilla Firefox as their Internet Browser. About 50 (34.48%), respondents use the internet explorer. It is observed from the study that the Internet Browsers which are recently launched have gained popularity compared to other browsers. Only 1 (0.68%) respondent still uses Safari which is the oldest browser compared to others.

Table 5: Use of Internet Browsers

Sl. No	Internet Browsers	No. of Respondents	Percentage (%)
1	Google Chrome	113	77.93
2	Internet Explorer	50	34.48
3	Maxthon	2	1.37
4	Mozilla Firefox	93	64.14
5	Opera	07	4.83
6	Safari	01	0.68

Percentage cannot be rounded after 100

USE OF SEARCH ENGINES

The present study has sought to find out whether the faculties use search engines to retrieve scholarly information on web or not. It is clear from the table 6 that, out of the 145 respondents, 137 (94.98%) respondents use the search engines for retrieving the information on web and only 08 (5%) of the respondents have not used the search engines. This clearly indicates that Search Engines are considered as an effective information retrieval tool.

Table 6: Use of Search Engines to Retrieve Information on Web

Sl. No	Use of Search Engines	No. of Respondents	Percentage (%)
1	Yes	137	94.48
2	No	08	05.12
	Total	145	100.00

USE OF GENERAL SEARCH ENGINES

In order to know the use of various search engines, the respondents were asked about the use of search engines and Meta search engines and the data is presented in table 7. All the respondents use Google and top the list among the

various Search Engines used in accessing information. All the respondents (100%) opine that Google is the best Search Engine (with various options) compared to other search engines. About 36 (24.83%) respondents use Yahoo along with Google. The least preferences were given to AltaVista, Bing, Lycos, Web Crawler and Dogpile. Hence, the data presented in the table clearly indicates that the respondents mainly depended on the Google and Yahoo.

Table 7: Use of Various Search Engines

Sl. No	General Search Engines	No. of Respondents	Percentage (%)
1	Alta vista	6	4.14
2	Ask	9	6.21
3	Bing	10	6.9
4	Dogpile	03	2.1
5	Google	145	100
6	Lycos	03	2.1
7	MyWebSearch	05	3.45
8	Web crawler	03	2.1
9	Yahoo	36	24.83

Percentage cannot be rounded after 100

USE OF SUBJECT SEARCH ENGINES

The general search engines offer a general information about all subjects. There is a need to have subject related search engines to search subject information. A question was asked about the use of different Engineering & Technology subject related Search engines. The data is presented in table 8. It is observed that 78 (53.8%) respondents use Science Research, followed by 28 (19.31%) respondents using Worldwide science, 22 (15.17%) respondents using Scirus &Science accelerator. The respondents have given less preference to other subject search engines. This clearly indicates that the respondents are aware of subject search engines and also they are using it.

Table 8: Use of Different Subject Search Engines in Engineering and Technology

Sl. No	Engineering & Technology Search Engines	No. of Respondents	Percentage (%)
1	Science accelerator	22	15.17
2	Science research	78	53.8
3	Scientific commons	11	7.59
4	Scirus	22	15.17
5	Sciseek	04	2.76
6	Scitation	11	7.59
7	Techxtra	08	5.52
8	Worldwide science	28	19.31

Percentage cannot be rounded after 100

IMPORTANCE AND PREFERENCE OF SEARCH ENGINE

The respondents were asked to specify how they gave importance and preference to use search engines. According to their responses presented in table 9, the majority, i.e. 72 (49.66%) respondents prefer search engines for advanced search feature helps in achieving relevant output, followed by 69 (47.59%) respondents preferring their easy to use and browse the Internet sources and for their easy of access. Other preferences were presented in table 9.

Table 9: Importance and Preference of Search Engines

Sl. No	Preference of Search Engines	No. of Respondents	Percentage (%)
1	Advanced search features helps in achieving relevant output	72	49.66
2	Easy for use	69	47.59
3	Easy to browse the Internet sources	69	47.59
4	More information can be retrieved	63	43.45
5	Most popular	23	15.86
6	Providing Up-to-date information	66	45.52
7	Recommended by Library Staff/colleagues	15	10.34
8	User friendly features	53	36.55

Percentage cannot be rounded after 100

AVAILABILITY OF QUALITY INFORMATION THROUGH INTERNET

There is a heap of information available over internet. Lakhs or crores of results will appear together on the screen depending upon the nature of information that the users are accessing. A question was raised about the accuracy of information available through search engines over internet. It is clear from the table 10 that most of the respondents i.e. 90 (66.07%) agree that the information accessed through the search engines is trustworthy/accurate/relevant to their study; 36 (24.83%) respondents are uncertain about the accuracy or authenticity of the information available over Internet and only 13 (8.97%) respondents opine that they cannot rely on the information available over Internet. This indicates that most of the respondents use search engines to retrieve scholarly information on the web.

Table 10: Availability of Quality Information through Internet

Sl. No	Opinion	No. of Respondents (145)	Percentage (%)
1	Strongly agree	05	3.48
2	Agree	90	66.07
3	Neither agree nor disagree	36	24.83
4	Disagree	13	8.97
5	Strongly disagree	01	0.69
Total		145	100.00

PROBLEMS ENCOUNTERED WHILE USING INTERNET

The respondents were asked to indicate the problems encountered while accessing Internet. It is observed that 82 (56.55%) respondents encountered the problem, ‘Advertising banners that take too long to load, whereas 63 (43.45%) respondents agree to the statement, ‘it takes too long to view/download pages’. About 62 (42.76%) respondents observed that ‘there are sites that do not work while searching information over the Internet’. and 13 (8.97) respondents facing the problem towards the not able to open the sites once they visited. The problems encountered by the respondents are given in table 11.

Table 11: Problems Encountered While Using Search Engines

Sl. No	Problems	No. of Respondents	Percentage (%)
1	Advertising banners that take too long to load	82	56.55
2	Difficult to organize the information I gather	37	25.52
3	Encountering links that do not work	62	42.76
4	Encountering pages with bad HTML	48	33.10
5	Encountering sites that want me to pay to access information	58	40

Table 11: Cond.,

6	It takes too long to view/download pages	63	43.45
7	Not being able to find a page I Once Visited	13	8.97
8	Not being able to find the information I am looking for	26	17.93
9	Some of the sites are not compatible with all browsers	59	40.69
10	Too many "junk" sites	44	30.34

Percentage cannot be rounded after 100

OPINION ABOUT THE NEED FOR ORIENTATION / TRAINING PROGRAMMES TO USE SEARCH ENGINES

The respondents were asked about the need for Orientation / training programme(s) to use the search engines effectively. According to their responses, the data is presented in table 12. It indicates that majority of the respondents 117 (80.69%) are in need of Orientation / training programmes to use search engines effectively and 18 (12.41%) respondents are uncertain about the statement. This indicates that there is a need to introduce orientation programmes for faculty members for better use of search engines effectively.

Table 12: Need for Orientation/Training Programmes on Search Engines

Sl. No	Opinion	No. of Respondents (145)	Percentage (%)
1	Strongly agree	27	18.62
2	Agree	90	62.07
3	Neither agree nor disagree	18	12.41
4	Disagree	6	4.14
5	Strongly disagree	4	2.76

CONCLUSIONS

The results of the study have provided some of the reasons that influence the satisfaction with information retrieval results of search engines. The Internet has revolutionized the information today. The search engines have made searching the Internet very easy. They have emerged as a solution to the problem of accessing information sources on the Net.

The search results are influenced by search capacity, design, speed, indexing, database and frequency of updating of a search engine. New features are being invented and added to the search engines to make the task of finding the appropriate information as simpler as possible.

The present study reveals that most of the respondents are aware of the subject related to search engines, they need some kind of literacy programmes regarding specific features of different search engines, how to use them and more focus should be placed on subject related search engines. There is a need of orientation programme on search engines to help the faculty members for effective and efficient use of search engines for access the qualitative information available on the web.

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